information for receiving supplied-data indicating a request for a service from another processing apparatus and converting said supplied-data using said virtual machine;

information for determining whether it is possible to provide said service in accordance with said converted supplied-data; and

information for, if it is possible to provide said service, providing said service.

B25 end

15. (Twice Amended) The information storage medium according to claim 14, said supplied-data comprising at least one of meeting data, an object for generating meeting data, an object for controlling the generation of meeting data, an object for reproducing meeting data, and an object for controlling the reproduction of meeting data.

16. (Twice Amended) The information storage medium according to claim 14, said transmission line comprising an IEEE-1394 bus.

REMARKS

Claims 1-16 are pending. By this Amendment, claims 1-16 are amended for further clarity. These amendments are merely made in accordance with U.S. Patent and Trademark Office practice. These amendments are not made based upon a substantial reason related to patentability. Thus, the amendment should not be construed to limit the scope of protection afforded the invention, pursuant to Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 234 F.3d 558, 56 USPQ2d 1865. No new matter is added.

The attached Appendix includes marked-up copies of each rewritten paragraph (37 C.F.R. 1.121(b)(iii)) and claim (37 C.F.R. 1.121(c)(ii)).

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for initial examination. Favorable reconsideration and prompt allowance of claims 1-16 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

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JAO:EDM/gam

Attachments:
Substitute Abstract
Appendix

Date: March 30, 2001

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION
Please grant any extension necessary for entry;
Charge any fee due to our Deposit Account No. 15-0461

APPENDIX

Changes to Specification:

The following are marked-up versions of the amended paragraphs:

Page 1, line 1:

~~DESCRIPTION~~

Page 1, between lines 3 and 5:

BACKGROUND OF THE INVENTION

Page 1, line 5:

~~Technical Field~~1. Field of the Invention

Page 1, line 9:

~~Background Art~~2. Description of Related Art

Page 1, between lines 14 and 15:

SUMMARY OF THE INVENTION

Page 1, lines 15 and 17:

It is desirable that devices ~~can~~ be connected as freely as possible to one another without concern for the types of PCs to be connected, the types of OSs, or other factors. That is, it is desired to improve the interconnectivity among devices.

Page 2, line 15:

~~Disclosure of Invention~~

Page 2, lines 29 and 30:

converting means (conversion unit) including a virtual machine for converting the supplied-data into a data format which allows the meeting data to be reproduced;

Page 3, lines 1-3:

storage means (storage unit) in which a generated image is stored and which is accessible by the another processing apparatus via the communication interface unit, and

Page 5, lines 17 and 18:

means for generating supplied-data (supplied-data generation unit), which is convertible by the converting means, in accordance with generated meeting data; and

Page 6, lines 15 and 16:

means for displaying the meeting data (display unit) in accordance with the image data; and

Page 6, lines 17 and 18:

means for controlling the displaying of the meeting data (control unit) in accordance with the control data.

Page 7, lines 1-5:

data control means (data control unit) for storing the supplied-data, converted by the converting means, in the storage ~~means~~ unit which stores particular presentation data while it manages the converted supplied-data received from each of the processing apparatuses that supply the supplied-data and for reading meeting data that contains at least part of the supplied-data and the presentation data from the storage ~~means~~unit; and

Page 7, lines 6 and 7:

the communication interface unit includes means for transmitting to the meeting data reproducing apparatus the meeting data that has been read (transmitting unit).

Page 7, line 26:

image-recording means (image-recording unit) for recording images of a meeting scene, and

Page 7, lines 27-29:

means for storing image data obtained as a result of the image-recording of the meeting scene (image data storing unit) in the storage ~~means~~unit as a part of the meeting data, in predetermined units of data, and

Page 12, line 18:

~~Brief Description of the Drawings~~

BRIEF DESCRIPTION OF THE DRAWINGS

Page 13, lines 7-11:

~~Figure 11 is a~~ Figures 11(A)-(B) are schematic ~~diagram~~ diagrams illustrating examples of the manner in which an image is displayed by means of distributed processing, wherein Figure 11(A) illustrates an example in which an image is displayed using only one liquid crystal projector and Figure 11(B) illustrates an example in which an image is displayed using four liquid crystal projectors.

Page 13, lines 15-19:

~~Figure 13 is a~~ Figures 13(A)-(B) are schematic ~~diagram~~ diagrams illustrating communication methods using virtual machines, wherein Figure 13(A) illustrates a conventional communication method and Figure 13(B) illustrates a communication method according to the present embodiment.

Page 13, line 26:

~~Best Mode for Carrying Out the Invention~~

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Page 18, lines 10-16:

In the present embodiment, as shown in Figure 4, the presentation data 1420 includes labels attached to respective units, such as Chapter 1, Section 1, Page 1, and so on. The

[IMAGE] tags or the like in the presentation data 1420 includes a pointer indicating the address of image data of additional data thereby allowing any desired part of the meeting data ~~42~~ 44 to be read by specifying the chapter number, the section number, and the page number. In Figure 4, arrows, except for those used as symbols, indicates examples of pointers and locations pointed to by the pointers.

Page 25, lines 10-14:

In the liquid crystal projector 202, the communication interface unit 32 receives the transmitted supplied-data, and the control unit ~~94~~ 92 performs a transfer control operation. The transmitted supplied-data is converted by the virtual machine 500 into a data format which allows generation of meeting data, and the generation unit 12 generates meeting data.

Page 33, lines 1-5:

~~Figure 11 illustrates~~ Figures 11(A)-(B) illustrate an example of a manner in which an image is displayed by means of distributed processing, wherein Figure 11(A) illustrates an example in which an image is displayed using only one liquid crystal projector and Figure 11(B) illustrates an example in which an image is displayed using four liquid crystal projectors.

Page 34, lines 1-4:

~~Figure 13 is a~~ Figures 13(A)-(B) are schematic ~~diagram~~ diagrams illustrating a communication method using a virtual machine 500, wherein Figure 13(A) illustrates a conventional communication method and Figure 13(B) illustrates a communication method according to the present embodiment.

Page 34, lines 23-30:

In the case where two liquid crystal projectors 200-5 and 200-6 are connected to each other via an IEEE-802.3 bus ~~102~~ 192 as shown in Figure 13(A), a connection between

application layer programs 12-5 and 12-6 is established wherein each application layer program cares about the other application layer program. If the liquid crystal projector 200-5, which is a first projector which starts interpretation of primitive presentation data, detects, in a statement of a program, a part which is out of the allowable display range, the liquid crystal projector 200-5 attempts to pass that part to the liquid crystal projector 200-6.

Page 37, lines 1-6:

The liquid crystal projector 200-1 includes a conversion unit ~~50~~ 50-1 including a virtual machine ~~500~~ 500-1 for converting supplied-data received from another liquid crystal projector 200-2 or the like serving as a data supply apparatus into a data format which allows generation or reproduction, and a communication interface unit ~~30~~ 30-1 for receiving, from the input device 400, supplied-data which is convertible by the conversion unit ~~50~~50-1.

Page 37, lines 7-13:

The liquid crystal projector ~~200~~ 200-1 also includes a generation unit ~~10~~ 10-1 for generating meeting data on the basis of the supplied-data converted by the conversion unit ~~50~~50-1, a control unit ~~90~~ 90-1 for storing the generated meeting data in a storage unit ~~40~~ 40-1 in such a manner that the meeting data is managed in predetermined units of data for each of other liquid crystal projectors 200 and for reading meeting data in predetermined units of data associated with each of the respective other liquid crystal projectors 200, and a reproduction unit ~~20~~ 20-1 for reproducing the meeting data read.

Page 37, lines 14-16:

The storage unit ~~40~~ 40-1 also stores the management table 42 and other data used by the control unit ~~90~~90-1, in addition to the meeting data 44 including presentation data and received supplied-data.

Page 37, lines 17-18:

The storage unit ~~40~~ 40-1 is accessible by the other liquid crystal projectors 200 via the communication unit ~~30~~30-1.

Page 37, lines 19-20:

The virtual machine ~~500~~ 500-1 according to the present embodiment is described below.

Page 42, lines 16 and 17:

The interconnectivity described above can be improved by forming the stored information ~~1400~~ 1410 in the manner described below.

Page 43, lines 30-33 and Page 44, lines 1-2:

Furthermore, it is preferable that the stored information 1410 include information for recording images of a meeting scene, that the storing information include information for storing the recorded image data as a part of the meeting data into the storage unit ~~1410~~ 1240 in particular units of data, and that the reproducing information include information for reproducing, in response to the reproduction command, the meeting data stored in the storage unit ~~1410~~ 1240 in particular units of data.

Changes to Claims:

The following are marked-up versions of the amended claims:

1. (Amended) A meeting system in which supplied-data convertible using a virtual machine is transmitted and received among a plurality of processing apparatuses interconnected via a transmission line, and in which meeting data is reproduced, ~~wherein~~

at least two of said plurality of processing apparatuses ~~include a~~ comprising meeting data reproducing apparatus respectively,

at least one meeting data reproducing apparatus ~~includes~~ comprising:

~~converting means~~ a conversion unit including a virtual machine ~~for converting~~ that converts said supplied-data into a data format which allows said meeting data to be reproduced;

a communication interface unit ~~for receiving~~ that receives said supplied-data from another processing apparatus; and

a storage ~~means~~ unit in which a generated image is stored and which is accessible by said another processing apparatus via said communication interface unit, and

~~wherein~~ each of said at least one meeting data reproducing apparatus and said another meeting data reproducing apparatus including said ~~converting means~~ conversion unit and said communication interface unit ~~reads~~ reading a part of said meeting data from said storage ~~means~~ unit and ~~reproduces~~ reproducing meeting data in a task-distributed fashion.

2. (Amended) A meeting system in which supplied-data convertible using a virtual machine is transmitted and received among a plurality of processing apparatuses interconnected via a transmission line, and in which meeting data is generated, ~~wherein~~

at least two of said plurality of processing apparatuses ~~include~~ comprising a meeting data generating apparatus respectively,

at ~~lest~~ least one meeting data generating apparatus ~~includes~~ comprising:

~~converting means~~ a conversion unit including a virtual machine ~~for converting~~ that converts said supplied-data into a data format which allows said meeting data to be generated;

a communication interface unit ~~for receiving~~ that receives said supplied-data convertible by said converting means from another processing apparatus; and

a storage ~~means for storing~~ unit that stores generated meeting data, which is accessible by the other processing apparatus via said communication interface unit, and

~~wherein~~ each of said at least one meeting data generating apparatus and the other meeting data generating apparatus including said ~~converting means~~ conversion unit and said communication interface unit ~~accesses~~ accessing said storage ~~means~~ unit and ~~generates~~ generating meeting data in a task-distributed fashion.

3. (Amended) A meeting system in which supplied-data convertible using a virtual machine is transmitted and received among a plurality of processing apparatuses interconnected via a transmission line, and in which meeting data is generated and reproduced, ~~wherein~~

at least one of said plurality of processing apparatuses ~~includes~~ comprising a meeting data generating apparatus,

at least one of said plurality of processing apparatuses ~~includes~~ comprising a meeting data reproducing apparatus,

said meeting data reproducing apparatus ~~includes~~ comprising:

~~converting means~~ a conversion unit including a virtual machine ~~for converting~~ that converts said supplied-data into a data format which allows said meeting data to be reproduced; and

a communication interface unit ~~for receiving~~ that receives said supplied-data, which is convertible by said ~~converting means~~conversion unit, from another processing apparatus;

said meeting data generating apparatus ~~includes~~ comprising:

~~means for generating~~ a supplied-data generation unit that generates supplied-data, which is convertible by said ~~converting means~~conversion unit, in accordance with generated meeting data; and

a communication interface unit ~~for transmitting~~ that transmits supplied-data including generated meeting data to said meeting data reproducing apparatus via said transmission line,

~~wherein~~ at least one of said meeting data generating apparatus and said meeting data reproducing apparatus ~~includes~~ comprising a storage ~~means for storing~~ unit that stores generated meeting data, which is accessible by another processing apparatus via said communication interface unit, and

said meeting data generating apparatus and said meeting data reproducing apparatus ~~access~~ accessing said storage ~~means~~ unit and ~~generate~~ generating and ~~reproduce~~ reproducing meeting data.

4. (Twice Amended) The meeting system according to claim 3~~1~~, ~~wherein~~

said supplied-data ~~includes~~ comprising at least one of image data for displaying said meeting data and control data for controlling the displaying of said meeting data,

said meeting data reproducing apparatus ~~includes~~ comprising:

~~means for displaying~~ a display unit that displays said meeting data in accordance with said image data; and

~~means for controlling~~ a control unit that controls the displaying of said meeting data in accordance with said control data.

5. (Twice Amended) The meeting system according to claim 3~~2~~, ~~wherein~~

said processing apparatus ~~includes~~ comprising a server device,

said supplied-data ~~includes~~ comprising a component object serving as a part of a program for generating said meeting data, and

said meeting data generating apparatus ~~generates~~ generating said program for generating meeting data in accordance with the received component object and ~~generates~~ generating said meeting data using said program.

6. (Twice Amended) The meeting system according to claim 3, ~~wherein~~

said meeting data generating apparatus ~~includes~~ comprising data control ~~means for~~unit that

~~storing~~ stores the supplied-data, converted by said ~~converting means~~conversion unit, in said storage ~~means~~ unit in which particular presentation data is stored while said supplied-data is managed in units of supplied-data received from each of said processing apparatuses, and

~~reading~~ reads meeting data including at least a part of said supplied-data and said presentation data from said storage ~~means~~ unit in accordance with a reproduction command from each of said processing apparatuses, and

said communication interface unit ~~includes means for transmitting~~ comprising a transmitting unit that transmits the read meeting data to said meeting data reproducing apparatus.

7. (Amended) The meeting system according to claim 6, ~~wherein~~

said meeting data reproducing apparatus ~~reproduces~~ reproducing said meeting data stored in said storage ~~means~~ unit in units of data associated with said processing apparatus which supplies said supplied-data, in accordance with said reproduction command.

8. (Twice Amended) The meeting system according to claim ~~7~~6, ~~wherein~~

said meeting data generating apparatus ~~includes~~ comprising:

an image-recording ~~means for recording~~ unit that records images of a meeting scene, and

~~means for storing~~ an image data unit that stores image data obtained as a result of the recording of images of the meeting scene in said storage ~~means~~ unit as a part of said meeting data, in predetermined units of data, and

said meeting data reproducing apparatus ~~reproduces~~ reproducing said meeting data stored in said storage ~~means~~unit, in predetermined units of data in accordance with said reproduction command.

9. (Amended) The meeting system according to ~~one of claims 3 to~~ claim 8, ~~wherein~~

at least one of said meeting data generating apparatus and said meeting data reproducing apparatus ~~includes~~ comprising a projector.

10. (Amended) The meeting system according to ~~one of claims 1 to~~ claim ~~9~~3, ~~wherein~~

said transmission line ~~comprises~~ comprising an IEEE-1394 bus.

11. (Amended) An information storage medium readable by a computer including a storage ~~means~~ unit and ~~for storing~~ that stores information for generating meeting data while a plurality of processing apparatuses interconnected via a transmission line transmit and receive, and ~~performed~~ perform distributed processing on, supplied data in a common format interpretable by a virtual machine, ~~wherein~~

said information ~~includes~~ comprising:

information for implementing a communication interface unit which allows said storage ~~means~~ unit to be shared by other processing apparatuses.

12. (Amended) An information storage medium which is readable by a computer and which stores information for generating meeting data while a plurality of processing apparatuses interconnected via a transmission line transmit and receive, and perform distributed processing on, supplied data in a common format interpretable by a virtual machine, ~~wherein~~

said information ~~includes~~ comprising:

information for generating supplied-data in said common format; and

information for transmitting said generated supplied-data to at least one of said processing apparatuses having storage ~~means~~ unit accessible by the respective processing apparatuses.

13. (Amended) An information storage medium which is readable by a computer and which stores information for reproducing meeting data while a plurality of processing apparatuses interconnected via a transmission line transmit and receive, and perform distributed processing on, supplied-data in a common format interpretable by a virtual machine, ~~wherein~~

said information ~~includes~~ comprising:

reading information for accessing at least one of said processing apparatuses having a storage ~~means~~ unit which stores said meeting data and which is accessible by the respective processing apparatuses to read said meeting data stored in said storage ~~means~~unit; and

reproducing information for reproducing read image data,

said reading information ~~includes~~ comprising:

information for generating supplied-data indicating a reading request and for converting said supplied-data into said common format; and

information for transmitting said converted supplied-data to a processing apparatus having said storage ~~means~~ unit to receive supplied-data including meeting data from said processing apparatus,

said reproducing information ~~includes~~ comprising:

information for implementing said virtual machine; and

information for converting supplied-data using said virtual machine in accordance with the received supplied-data so as to reproduce the meeting data.

14. (Amended) An information storage medium which is readable by a computer and which stores information for generating meeting data while a plurality of processing apparatuses interconnected via a transmission line transmit and receive, and perform distributed processing on, supplied-data in a common format interpretable by a virtual machine, ~~wherein~~

said information ~~includes~~ comprising:

requesting information for requesting a particular service to another processing apparatus;

providing information for providing a particular service to another processing apparatus,

said requesting information ~~includes~~ comprising:

information for generating supplied-data indicating a request for said particular service and converting said supplied-data into said common format; and

information for transmitting said converted supplied-data to another processing apparatus,

said providing information ~~includes~~ comprising:

information for implementing said virtual machine;

information for receiving supplied-data indicating a request for a service from another processing apparatus and converting said supplied-data using said virtual machine;

information for determining whether it is possible to provide said service in accordance with said converted supplied-data; and

information for, if it is possible to provide said service, providing said service.

15. (Twice Amended) The information storage medium according to claim 1411, ~~wherein~~

said supplied-data ~~includes~~ comprising at least one of meeting data, an object for generating meeting data, an object for controlling the generation of meeting data, an object for reproducing meeting data, and an object for controlling the reproduction of meeting data.

16. (Twice Amended) The information storage medium according to claim 1411, ~~wherein~~

said transmission line ~~comprises~~ comprising an IEEE-1394 bus.